IN THE DRAWINGS

The attached sheet of drawings includes changes to Figs. 1, 3, and 6. These sheets, which include Figs. 1, 3, 6, 7, and 8 replace the original sheets including Figs. 1, 3, 6, 7, and 8.

Attachment: Replacement Sheets

<u>REMARKS</u>

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-10 are pending in this application, Claims 1-10 having been amended by the present Amendment, and Claims 11-13 having been cancelled without prejudice or disclaimer. Support for amended Claims 1-10 can be found, for example, in the original claims, drawings, and specification as originally filed.[1] Applicants respectfully submit that no new matter has been added.

In the outstanding Office Action, the drawings, the claims, and the specification were objected to due to informalities; Claims 10-13 were rejected under 35 U.S.C. §101; Claims 5-8 were rejected under 35 U.S.C. §112, second paragraph, as indefinite; and Claims 1-13 were rejected under 35 U.S.C. §102(b) as anticipated by <u>Rai</u> (EPO47956).

In response to the objection to the drawings, reference numerals 25 and 35 have been deleted from Figure 1. Further, Applicants respectfully note that reference numerals 610" and 630" are described in the specification, for example, at page 12, lines 10-13. Also, in Figure 3, Applicants amended one of the two reference numerals 78, to recite --78'--. Accordingly, Applicants amended the phrase "which, via delay 78, is ..." at page 6, line 7 of the specification to "which, via delay 78 and 78', is...." Lastly, in Figure 6, Applicants have amended the label "veNAM" to recite "NEGNAM" as described at page 9, lines 1-2 of the specification.

Accordingly, Applicants respectfully request that the objections to the drawings be withdrawn.

In response to the objections to the specification, Applicants have amended the Abstract to correct the noted informality stated in the outstanding Office Action. Further, a

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[1] See original Claims 1-10.

Cross Reference to Related Applications section has been added, in accordance with the suggestion set forth in the outstanding Office Action.

Accordingly, Applicants respectfully request that the objections to the specification be withdrawn.

In response to the objection to Claims 1-9 and 11-13, Applicants have amended the claims to correct the noted informalities.

Accordingly, Applicants respectfully request that the objection to the claims be withdrawn.

In response to the rejection of Claims 10-13 under 35 U.S.C. §101, Applicants have amended Claim 10 to recite "a computer readable storage medium encoded with instructions, which when executed by a computer causes the computer to execute a method." Claims 11-13 are canceled. MPEP 2106 IV.B.1(a) states that:

> A claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory.

In view of the presently submitted claim amendments and foregoing comments Applicants respectfully submit that Claim 10 defines statutory subject matter.

Furthermore, Claims 11-13 are cancelled without prejudice or disclaimer.

Accordingly, Applicants respectfully request that the rejection of Claim 10 under 35 U.S.C. §101 be withdrawn.

In response to the rejection of Claims 5-8 under 35 U.S.C. §112, second paragraph, Applicants have amended Claim 5 in accordance with the suggestion set forth in the outstanding Office Action.

Accordingly, Applicants respectfully request that the rejection of Claims 5-8 under 35 U.S.C. §112, second paragraph, be withdrawn.

In response to the rejection of Claims 1-13 under 35 U.S.C. §102(b) as anticipated by Rai, Applicants respectfully submit that amended independent Claim 1 recites novel features clearly not taught nor rendered obvious by the applied reference.

Amended independent Claim 1 is directed to a digital image processing apparatus including, *inter alia*:

> ... each color correction process after a first process in said succession is configured to inhibit color mapping in respect of said loci associated with previous processes in said succession.

An advantageous feature of Applicants' invention is the reduction in the occurrence of color artifacts when a succession of color correction processes are applied to an image, by inhibiting color mapping with respect to color space loci associated with previous color correction processes.

Rai describes a color correction system which implements color manipulation in both a primary color domain and a hue domain. In particular, Rai describes a plurality of color correction blocks for manipulating the color of pixels within a video frame or an image region defined by an operation.[2] Each color correction block allows a colorist to define up to sixteen non-overlapping hue sectors which are also referred to as color correction channels.[3] The colorist may use different color correction channels to correct different parts of the image, for example, an image region within a geometric constraint and an image region outside the geometric constraint.[4] Furthermore, Rai describes that the color correction blocks may be arranged in parallel or series.[5]

However, Rai fails to teach or suggest that "each color correction process after a first process in said succession is configured to inhibit color mapping in respect of said loci

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[2] See Rai at column 9, lines 44-47, and column 10, lines 50-54.
[3] See Rai at column 10, lines 47-50.
[4] See Rai at column 15, lines 31-40 and column 26, lines 22-27.
[5] See Rai at column 9, lines 39-42; column 35, lines 37-40; and Figure 11.

associated with previous processes in said succession," as recited in Applicants' amended independent Claim 1.

As mentioned above, Rai describes that the color correction blocks may be arranged in series.[6] However, Rai merely describes that the color correction applied to a pixel is dependent solely upon whether the pixel occurs within a color correction channel (e.g. hue sector) defined for that color correction block. If the pixel does lie within a color correction channel (e.g. hue sector) defined for that block, then color correction is applied to the pixel. On the other hand, if the pixel does not lie within the color correction channel defined for that block, then the pixel is unaltered by the color correction block.[7] Therefore, the output of each color correction block is dependent solely upon whether the input pixel is within a color correction channel defined for that correction block. In other words, in Rai, color correction applied by a current block *is independent from the color correction applied by a previous block*.

In contrast, in Applicants' amended independent Claim 1, color mapping *in respect of loci associated with previous color correction processes is inhibited*. By inhibiting color mapping in respect of the loci associated with previous color correction processes, the claimed invention provides a technique for alleviating a problem that arises when a succession of color correction processes are applied to an image, in which subjectively undesirable results may arise.[8] In other words, Applicants' color correction logic recited in independent Claim 1 helps prevent a position in color space that has previously been modified by an earlier color correction process from being modified again.

Page 7 of the outstanding Official Action asserts that applying alpha mixing applied by one color correction block is the same as Applicants' inhibiting color mapping in respect of color space loci associated with previous color correction processes. However, the alpha

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[6] See Rai at column 9, lines 39-42.
[7] See Rai at column 36, lines 24-38.
[8] See, for example, page 2, lines 18-24 of the specification.

mixing described in <u>Rai</u> is not the same as Applicants' claimed "inhibit[ing] color maping in respect of said loci associated with previous processes in said succession." In <u>Rai</u>, alpha mixing is applied as part of the color correction process carried out by a color correction block,[9] while in Applicants' Claim 1 the color correction process inhibits *"color mapping in respect of said lock associated with previous processes...."* Therefore, in Applicants' Claim 1, whether color mapping is applied is dependent upon whether a pixel has previously been modified by a previous color correction process. This is neither taught nor suggested by <u>Rai</u>.

In <u>Rai</u>, a color correction process may be applied to a pixel by a first color correction block if the pixel is within a color correction channel defined for that block. The output of the first block may then be passed to a second color correction block if the blocks are arranged in series. However, the second color correction block will merely detect whether the pixel is within one or more color correction channels defined for the second color correction block. Therefore, a pixel that has previously been color corrected by the first block may, if it is within a color correction channel defined for the second block, also be color corrected by the second block. Thus, the color correction process of <u>Rai</u> may introduce color artifacts into portions of video images that have previously been color corrected, if the color correction channels for different color correction blocks overlap. Further <u>Rai</u> does not address the problem of how to reduce color artifacts in portions of images *that have previously been color corrected*. In fact, <u>Rai</u> may even introduce color artifacts in this scenario. Therefore, <u>Rai</u> teaches away from Applicants' claimed invention.

"A reference may be said to teach away when a person of ordinary skill in the art, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). To this end, "disclosures

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[9] See <u>Rai</u> at column 36, lines 28-38, and column 37, lines 20-50.

in the references that diverge from and teach away from the invention cannot be disregarded," Phillips Petroleum Company v. U.S. Steel Corp., 9 U.S.P.Q.2d 1461 (Fed. Cir. 1989).

Accordingly, Applicants respectfully submit that amended independent Claim 1 (and all claims depending thereon) patentably distinguishes over Rai.
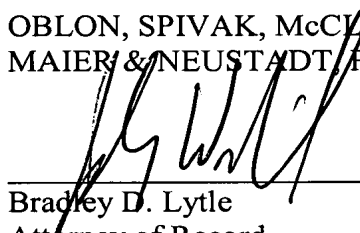
Amended independent Claims 9 and 10 recite "inhibiting, in each color correction process after said first process in said succession, color mapping in respect of said loci associated with previous processes in said succession." Thus, Claims 9 and 10 are believed to be patentable for at least the reasons discussed above.

Accordingly, Applicants respectfully request the rejection of Claims 1-13 under 35 U.S.C. §102(b) be withdrawn.

Consequently, in view of the present amendment, and in light of the above discussion, the pending claims as presented herewith are believed to be in condition for formal allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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